



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/075,027	02/14/2002	Yoshikazu Aoki	122.1488	7499
21171	7590	11/09/2005	EXAMINER	
STAAS & HALSEY LLP SUITE 700 1201 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005			MERED, HABTE	
			ART UNIT	PAPER NUMBER
			2662	

DATE MAILED: 11/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. <u>10/075,027</u>	Applicant(s) YOSHIKAZU AOKI	
	Examiner Habte Mered	Art Unit 2662	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on ____ is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>02/14/02, 03/21/02</u> | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 1, 7, 8, 14, and 15** are rejected under 35 U.S.C. 103(a) as being unpatentable over Shurmer et al (US 5, 974, 237), hereinafter referred to as Shurmer, in view of Hiroaki (Japanese Patent Publication Number 02-048842) and Zisapel et al (US 6, 665, 702), hereinafter referred to as Zisapel.

Shurmer teaches the monitoring of a broadband communication network.

Shurmer teaches a system and method of network monitoring in data communications network between a central computer and a plurality of remote nodes that are connected to the central computer via a broadband network, wherein the central computer comprises: a communication order determining unit (**Figure 8, Element 806**) that determine order of communication between the central computer and the plurality of remote nodes; and a communication control unit (**Figure 6, element 23**) that controls data communications between the central computer and the plurality of remote nodes, according to the communication order and the communication interval. (See Column 2, Lines 50-62; Column 11, Lines 5-15; and Column 12, Lines 5-12)

Shurmer implicitly teaches the value of collecting data on network performance. Shurmer however, fails to explicitly disclose a system for dispersing the load of a network in order to avoid local traffic congestion.

Zisapel teaches load balancing in a data communication network.

Zisapel discloses a system for dispersing the load of a network in order to avoid local traffic congestion. **(See Figures 1A, 2C, and 3B. Zisapel implements load balancing by monitoring and polling individual nodes. See Column 13, Lines 48-67)**

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Schurmer's apparatus with a system for dispersing the load of a network in order to avoid local traffic congestion. The motivation being Schurmer collects network performance elements in Column 5, Line 54 and the data is available to the network management system to use it and Zisapel teaches how the monitored data is used for load balancing.

Schumer further fails to disclose a communication interval determining unit that determines a communication interval between a remote node with which the central computer communicates this time and a remote node with which the central computer communicates next time, among the plurality of remote nodes that communicate with the central computer.

Hiroaki discloses a polling control system.

Hiroaki teaches a communication interval determining unit that determines a communication interval between a remote node with which the central computer

Art Unit: 2662

communicates this time and a remote node with which the central computer communicates next time, among the plurality of remote nodes that communicate with the central computer. **(Hiroaki teaches a polling control unit – see the abstract and constitution sections).**

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Schurmer's apparatus with a polling control system. The motivation being Schurmer describes a polling interval attribute for his monitoring system on Column 13, Line 23 and consequently his system has to have a polling control system.

3. **Claims 2 and 9** are rejected under 35 U.S.C. 103(a) as being unpatentable over Schurmer in view of Hiroaki and Zisapel as applied to claims 1 and 8 above, and further in view of Takashi et al (Japanese Patent Publication Number 02-131044), hereinafter referred to as Takashi.

The combination of Schurmer, Zisapel, and Hiroaki, teach all aspects of the claimed invention as set forth in the rejection of claims 1 and 8, but fails to disclose a system and method for dispersing the load of a network wherein the communication interval is obtained as follows: a repetition period for repetitively executing communications with the whole plurality of remote nodes is divided by a total number of the remote nodes, and a quotient obtained is subtracted by a processing time per one node thereby to obtain the communication interval which includes a communication waiting time.

Takashi teaches a polling sequence deciding system.

Takashi teaches a system and method for dispersing the load of a network wherein the communication interval is obtained as follows: a repetition period for repetitively executing communications with the whole plurality of remote nodes is divided by a total number of the remote nodes, and a quotient obtained is subtracted by a processing time per one node thereby to obtain the communication interval which includes a communication waiting time. **(Takashi teaches a polling control unit – see the abstract and constitution sections).**

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Schurmer's apparatus with a polling sequence where the whole plurality of remote nodes is divided by a total number of the remote nodes, and a quotient obtained is subtracted by a processing time per one node thereby to obtain the communication interval which includes a communication waiting time. The motivation being Schurmer describes a polling interval attribute for his monitoring system on Column 13, Line 23 and consequently his system has to have a polling control system with a polling algorithm.

4. **Claims 3-6 and 10-13** are rejected under 35 U.S.C. 103(a) as being unpatentable over Schurmer in view of Hiroaki and Zisapel as applied to claims 1 and 8 above, and further in view of Kazou et al (Japanese Patent Publication Number 02-131044), hereinafter referred to as Kazou.

5. Regarding **claims 3 and 10**, the combination of Schurmer, Zisapel, and Hiroaki, teach all aspects of the claimed invention as set forth in the rejection of claims 1 and 8, but fails to disclose a system and method for dispersing the load of a network, wherein

the plurality of remote nodes are divided into groups of: a plurality of transmission lines, and the frequency that the transmission lines divided into the groups are used for communications is increased in proportion to the number of remote nodes that are accommodated in the divided groups of transmission lines.

Kazou teaches a packet exchange relay line selecting system.

Kazou discloses a system and method for dispersing the load of a network, wherein the plurality of remote nodes are divided into groups of: a plurality of transmission lines, and the frequency that the transmission lines divided into the groups are used for communications is increased in proportion to the number of remote nodes that are accommodated in the divided groups of transmission lines. **(Kazoui teaches using transmission lines to attain uniform load – see the abstract and constitution sections).**

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combination of Schurmer's and Zisapel's apparatus with a method for dispersing the load of a network, wherein the plurality of remote nodes are divided into groups of: a plurality of transmission lines. The motivation being Schurmer collects network performance elements in Column 5, Line 54 and the data is available to the network management system to use it and Zisapel teaches how the monitored data is used for load balancing and Kazou in the last line of the constitution section talks about attaining a uniform load.

6. Regarding **claims 4 and 11**, the combination of Schurmer, Zisapel, and Hiroaki, teach all aspects of the claimed invention as set forth in the rejection of claims 1 and 8,

but fails to disclose a system and method for dispersing the load of a network, wherein the plurality of remote nodes are divided into groups of a plurality of transmission lines, and the frequency that the transmission lines divided into the groups are used for communications is increased in proportion to the number of remote nodes that are accommodated in the divided groups of transmission lines.

Kazou discloses a system and method for dispersing the load of a network, wherein the plurality of remote nodes are divided into groups of a plurality of transmission lines, and the frequency that the transmission lines divided into the groups are used for communications is increased in proportion to the number of remote nodes that are accommodated in the divided groups of transmission lines. **(Kazou teaches using transmission lines to attain uniform load – see the abstract and constitution sections. The number of transmission lines increasing with the number of remote nodes increasing in the system is inherent to sound transmission planning).**

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combination of Schurmer's and Zisapel's apparatus with a method for dispersing the load of a network, wherein the plurality of remote nodes are divided into groups of: a plurality of transmission lines. The motivation being Schurmer collects network performance elements in Column 5, Line 54 and the data is available to the network management system to use it and Zisapel teaches how the monitored data is used for load balancing and Kazou in the last line of the constitution section talks about attaining a uniform load.

7. Regarding **claims 5 and 12**, the combination of Schurmer, Zisapel, and Hiroaki, teach all aspects of the claimed invention as set forth in the rejection of claims 1 and 8, but fails to disclose a system and method for dispersing the load of a network, wherein the plurality of remote nodes are divided into groups of a plurality, of transmission lines, and the frequency that the transmission lines divided into the groups are used for communications is increased in proportion to the line speeds of the divided transmission lines.

Kazou teaches a system and method for dispersing the load of a network, wherein the plurality of remote nodes are divided into groups of a plurality, of transmission lines, and the frequency that the transmission lines divided into the groups are used for communications is increased in proportion to the line speeds of the divided transmission lines. **(Kazou teaches using transmission lines to attain uniform load – see the abstract and constitution sections. Using the high speed load more often to balance the network load is again inherent to sound transmission planning).**

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combination of Schurmer's and Zisapel's apparatus with a method for dispersing the load of a network, wherein the plurality of remote nodes are divided into groups of: a plurality of transmission lines. The motivation being Schurmer collects network performance elements in Column 5, Line 54 and the data is available to the network management system to use it and Zisapel teaches how the

monitored data is used for load balancing and Kazou in the last line of the constitution section talks about attaining a uniform load.

8. Regarding **claims 6 and 13**, the combination of Schurmer, Zisapel, and Hiroaki, teach all aspects of the claimed invention as set forth in the rejection of claims 1 and 8, but fails to disclose a system and method for dispersing the load of a network, wherein the plurality of remote nodes are divided into groups of a plurality of transmission lines, and the frequency that the transmission lines divided into the groups are used for communications is increased in proportion to the line speeds of the divided transmission lines.

Kazou discloses a system and method for dispersing the load of a network, wherein the plurality of remote nodes are divided into groups of a plurality of transmission lines, and the frequency that the transmission lines divided into the groups are used for communications is increased in proportion to the line speeds of the divided transmission lines. **(Kazou teaches using transmission lines to attain uniform load – see the abstract and constitution sections. Using the high speed load more often to balance the network load is again inherent to sound transmission planning).**

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combination of Schurmer's and Zisapel's apparatus with a method for dispersing the load of a network, wherein the plurality of remote nodes are divided into groups of: a plurality of transmission lines. The motivation being Schurmer collects network performance elements in Column 5, Line 54 and the data is

Art Unit: 2662

available to the network management system to use it and Zisapel teaches how the monitored data is used for load balancing and Kazou in the last line of the constitution section talks about attaining a uniform load.


Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Habte Mered whose telephone number is 571 272 6046. The examiner can normally be reached on Monday to Friday 9:30AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on 571 272 3088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HM
10-29-2005


JOHN P. E.
PRIMARY EX